

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 1. (Currently amended) A LIN bus system comprising a plurality of modules
2 linked to a LIN bus along which electronic data or instructions can be sent to and from each said
3 module, at least one of said modules being non configured and having no unique identification
4 address associated therewith, said at least one module having a unique code associated therewith,
5 said system further including configuration means which interrogates said modules and detects
6 the unique code of said at least one non-configured module and transmits a configuration signal
7 to the module to configure the module, each said non-configured module including counter
8 means which is incremented each time a non-configured module is configured, said counter
9 means of each non-configured module, once configured, providing a unique code which is
10 indicative of the position of the module in the system.

1 2. (Original) A LIN bus system as claimed in claim 1 wherein the at least
2 one module having a unique code associated therewith is a reconfigurable module having means
3 for being configured with an ID and also having embedded within it at the manufacturing stage a
4 fixed unique Chip Identification Code (CIN) for use during a configuring operation.

1 3. (Original) A LIN bus system as claimed in claim 2 wherein said
2 reconfigurable module is a module compatible with the LIN bus Standard.

1 4. (Original) A LIN bus system as claimed in claim 3 wherein said
2 reconfigurable module has two LIN Bus interface pins connected by a series resistor.

1 5. (Original) A LIN bus system as claimed in claim 4 wherein the series
2 resistor is a 1 ohm resistor.

1 6. (Previously presented) A LIN bus system as claimed in claim 1 wherein
2 said reconfigurable module further comprises a pull up resistor and a pull up current source for
3 forcing a pull up current through the pull up resistor.

1 7. (Previously presented) A LIN bus system as claimed in claim 3 wherein if
2 a number of said reconfigurable modules are connected in a daisy chain manner standard LIN
3 Bus arbitration rules apply for selecting one module from the daisy chain.

1 8. (Previously presented) A LIN bus system as claimed in claim 7 wherein
2 said reconfigurable module further comprises a pull up resistor and a pull up current source for
3 forcing a pull up current through the pull up resistor and wherein said pull up current only flows
4 whilst said module is selected.

1 9. (Previously presented) A LIN bus system as claimed in claim 1 wherein
2 said reconfigurable module further comprises a position counter, which may be incremented to
3 indicate the position of the module in a daisy chain.

1 10. (Previously presented) A LIN bus system as claimed in claim 1 wherein
2 said reconfigurable module further comprises a random code generator for generating a random
3 code of a plurality of bits in length to identify the module as an alternative to the CIN code.

1 11. (Previously presented) A LIN bus system as claimed in claim 1 wherein
2 said unique code is a CIN.

1 12. (Currently amended) A LIN bus system as claimed in ~~any one of~~ claim 1
2 wherein said unique code is a randomly generated code.

1 13. (Previously presented) A LIN bus system as claimed in claim 1 wherein
2 said LIN Bus system comprises a plurality of non-configured reconfigurable modules connected
3 together in a daisy chain manner.

1 14. (Original) A LIN bus system as claimed in claim 13 wherein a
2 configuration sequence is performed to configure each of the plurality of non-configured
3 reconfigurable modules.

1 15. (Original) A LIN bus system as claimed in claim 14 wherein during a
2 configuration sequence the bus master transmits a configuration request and all non-configured
3 reconfigurable modules respond by transmitting a reply consisting of their unique code.

1 16. (Original) A LIN bus system as claimed in claim 15 wherein standard
2 LIN bus arbitration rules apply, wherein active states win over recessive states, and one non-
3 configured reconfigurable module will thus win the arbitration and become the ‘selected
4 module’.

1 17. (Previously presented) A LIN bus system as claimed in claim 16 wherein
2 the selected module then forces a current through a pull up resistor.

1 18. (Previously presented) A LIN bus system as claimed in claim 17 wherein
2 non-selected non-configured reconfigurable modules monitor the current through their series
3 resistors and thereby determine that a selected module is responding.

1 19. (Previously presented) A LIN bus system as claimed in claim 1 wherein
2 each non-configured reconfigurable module incorporates a position counter incremented on each
3 occasion that a selected module responds with a forced current.

1 20. (Previously presented) A LIN bus system as claimed in claim 19 wherein
2 the position counter on a particular non-configured reconfigurable module is not incremented
3 when the particular non-configured reconfigurable module is itself selected.

1 21. (Original) A LIN bus system as claimed in claim 20 wherein the position
2 counter on a particular non-configured reconfigurable module is not incremented after the
3 particular module has been selected.

1 22. (Previously presented) A LIN bus system as claimed in claim 21
2 wherein once all non-configured reconfigurable modules have been selected each will have a
3 position counter showing a unique position for that module within a daisy chain and this unique
4 position counter value is used to select a module and configure it for use in the system.

1 23. (Currently amended) A method of configuring a LIN Bus system
2 comprising a plurality of non-configured reconfigurable modules connected in a daisy chain
3 manner comprising the steps of: transmitting a configuration request from a bus master; selecting
4 one module from ~~the a daisy chain of non-configured reconfigurable modules~~ by standard LIN
5 bus arbitration rules; forcing a current through a pull up resistor of the selected module;
6 incrementing a position counter of each module within the daisy chain that is not currently or
7 previously selected; repeating the above steps until each module in the daisy chain has been
8 selected, the position ~~counters~~ counter for each module thus showing ~~its a value associated with a~~
9 unique position in the chain; and using the unique position counter value to select and configure
10 a desired module ~~or a plurality of desired modules~~.

1 24. (Canceled)